Dealership Database

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Project Information

The dealership database local application provides a simple, refined application for dealerships to manage inventory, customer information, and sales, as well as analyze sales data for specified time periods.

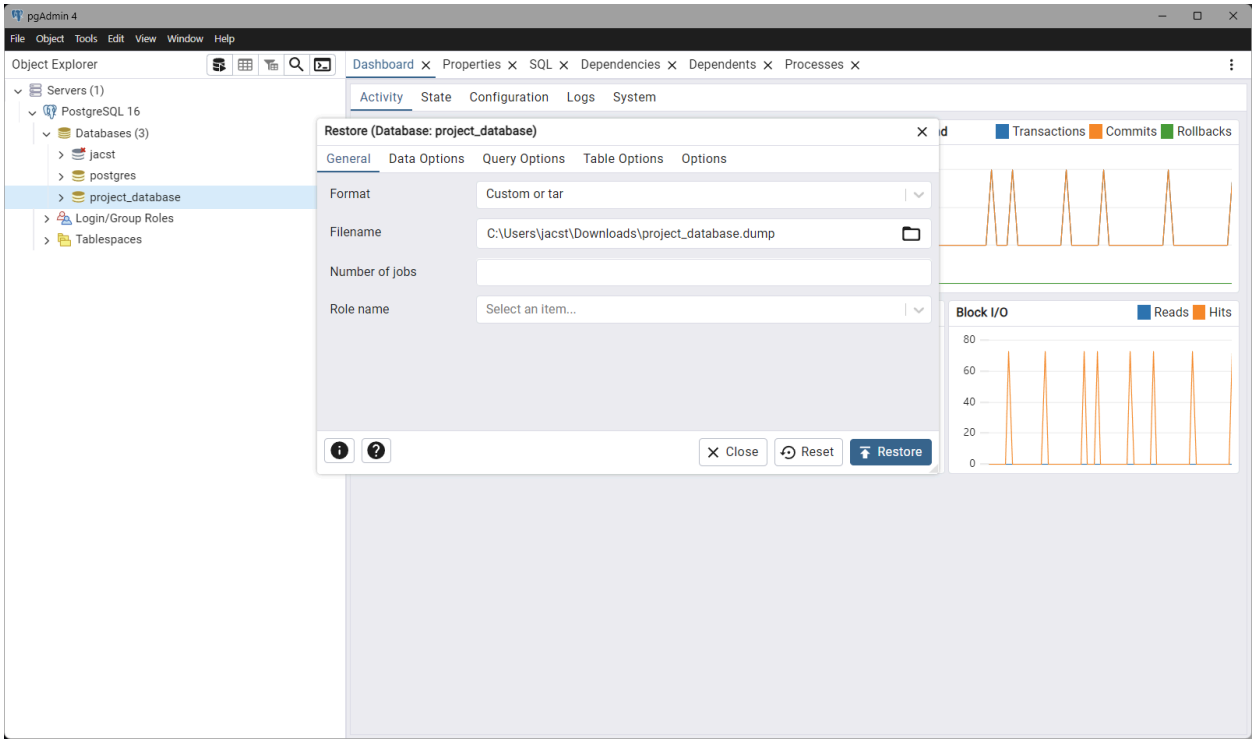
GUI Instruction Video

https://youtu.be/8FnuodJEWBU

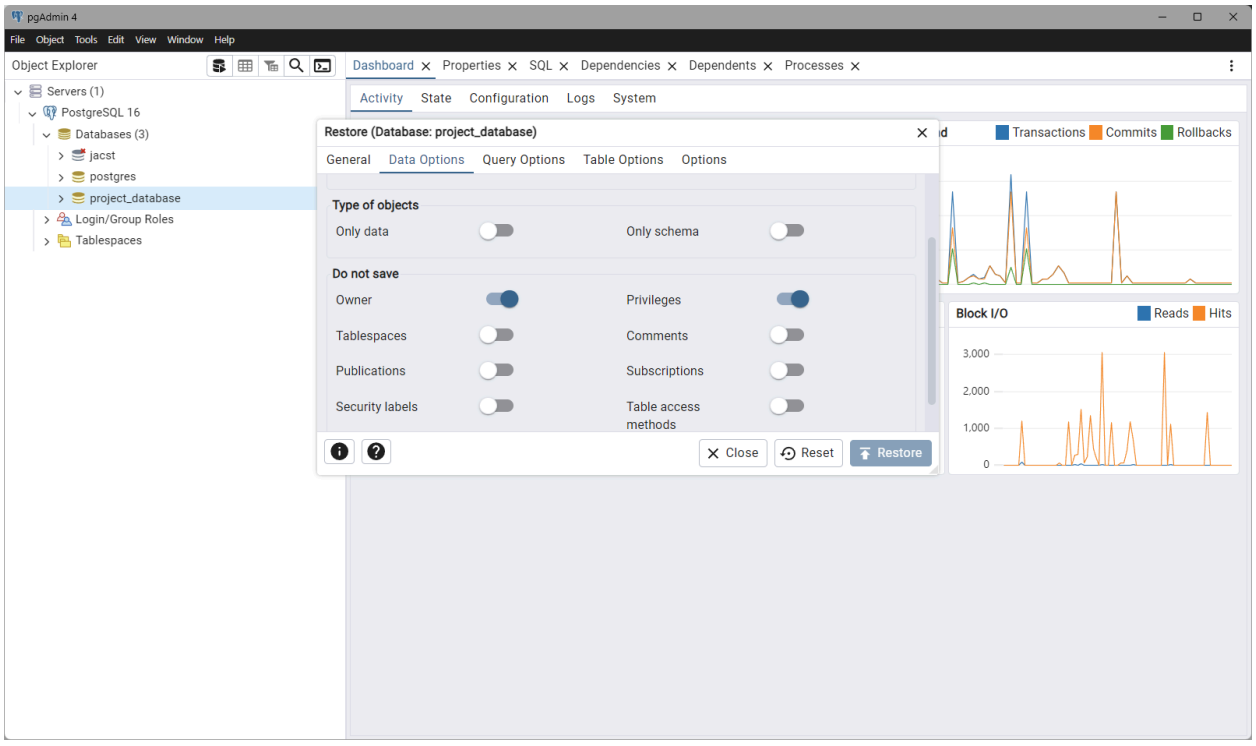
GitHub Repository

https://github.com/jacstephen1/DealershipDatabase

Database Setup



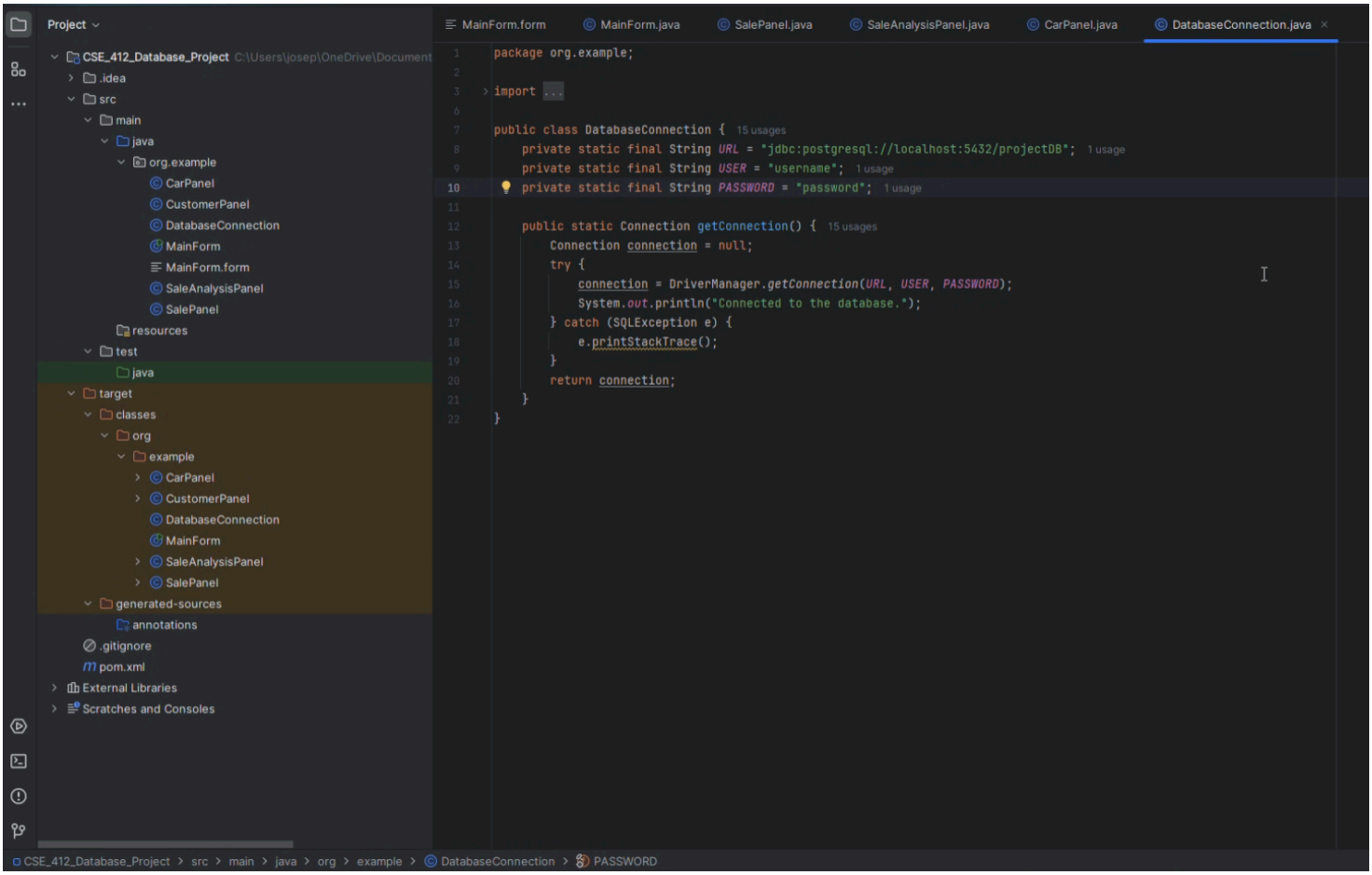
❖ Once a new database is created, use pgAdmin 4 and restore the database using the .dump file.



❖ NOTE: Ensure that the owner and privileges are not saved in the data options tab.

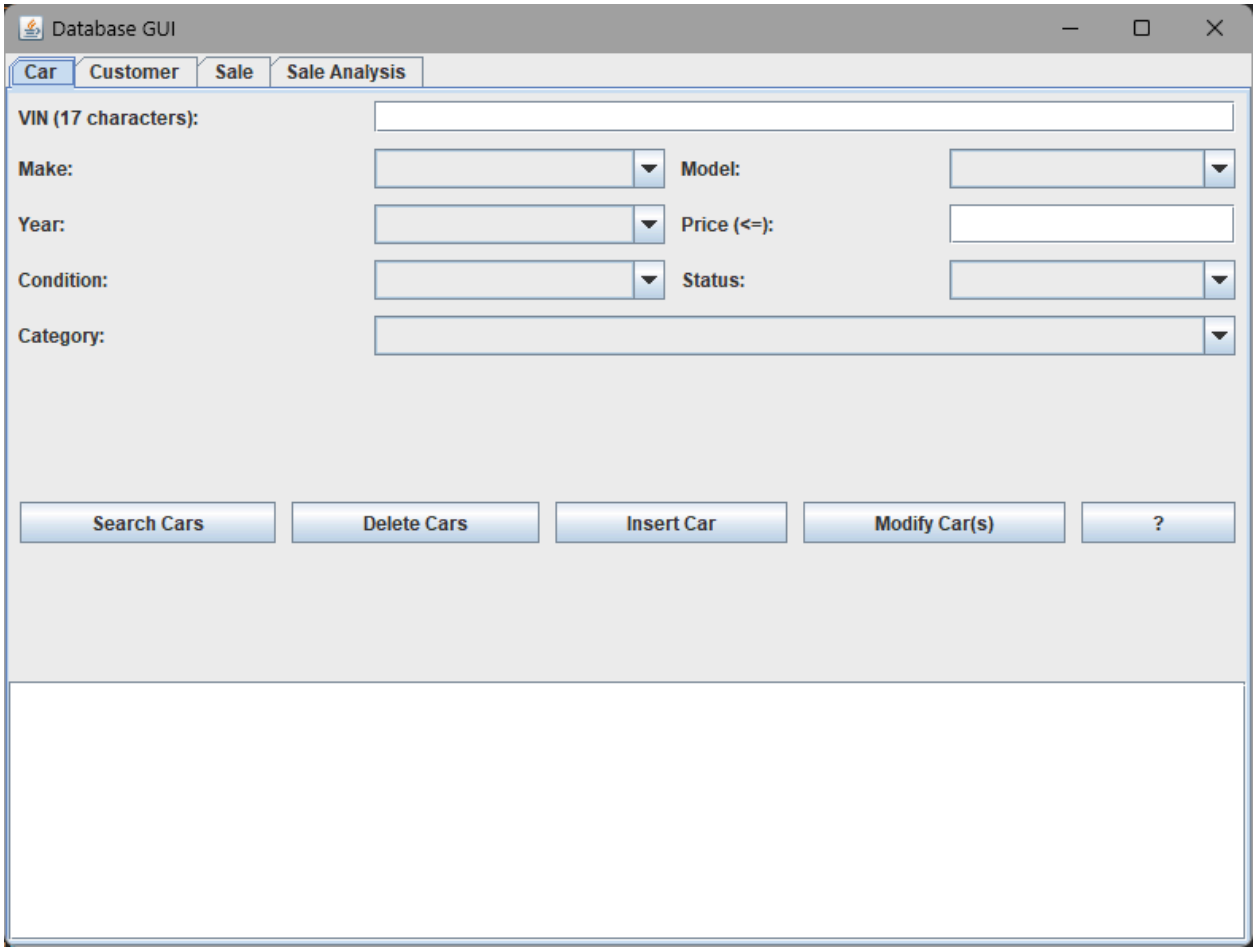
GUI Setup

- Import the CSE_412_Database_Project into IntelliJ
- Go to the DatabaseConnection.java file and replace the following:
  - URL = “jdbc:postgresql://HOST_IP:HOST_PORT/DATABASE_NAME”
  - USER = “USERNAME”
  - PASSWORD = “PASSWORD”



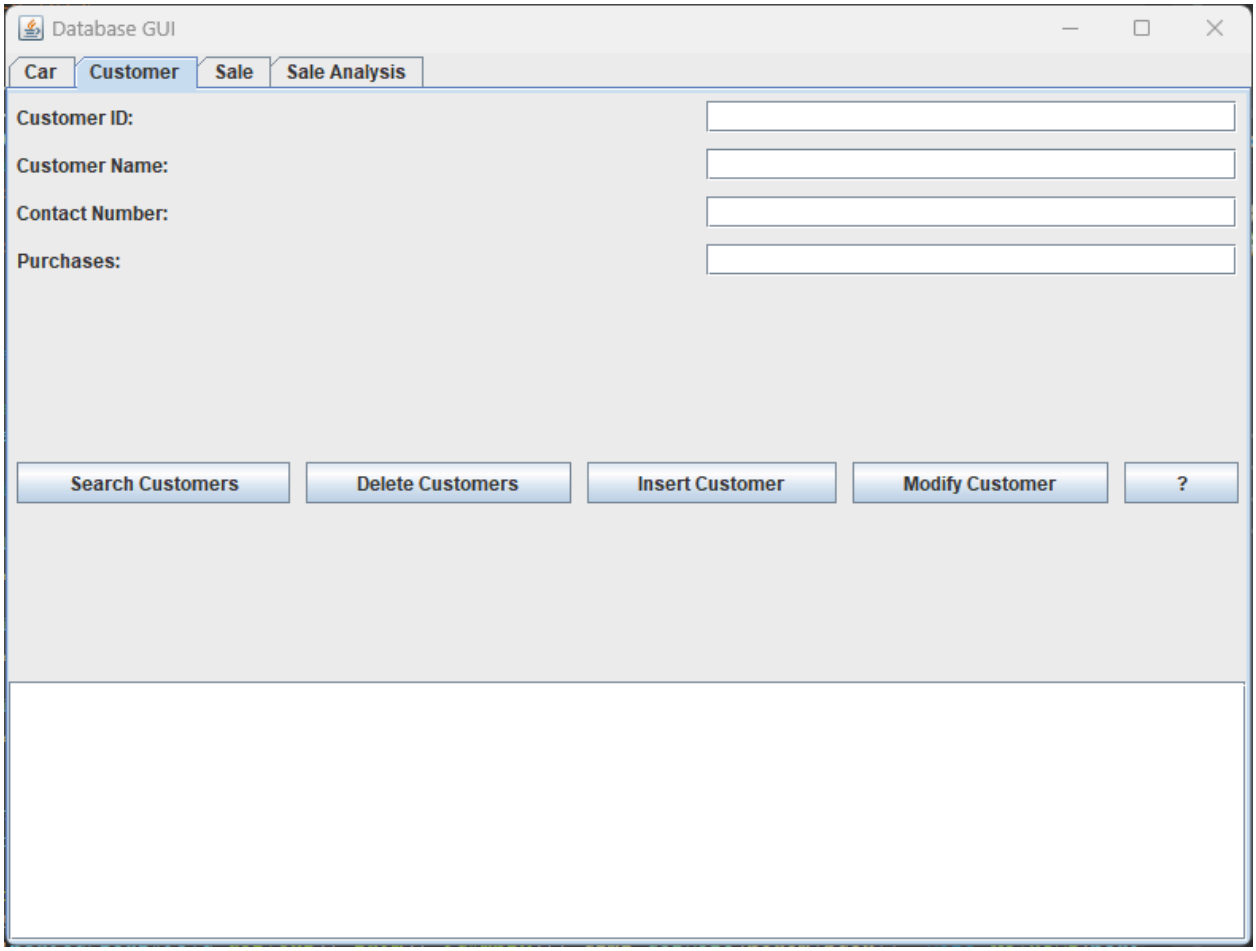
- Once changes have been made, the GUI can be run from MainForm.java

Main GUI: Car/Inventory Information



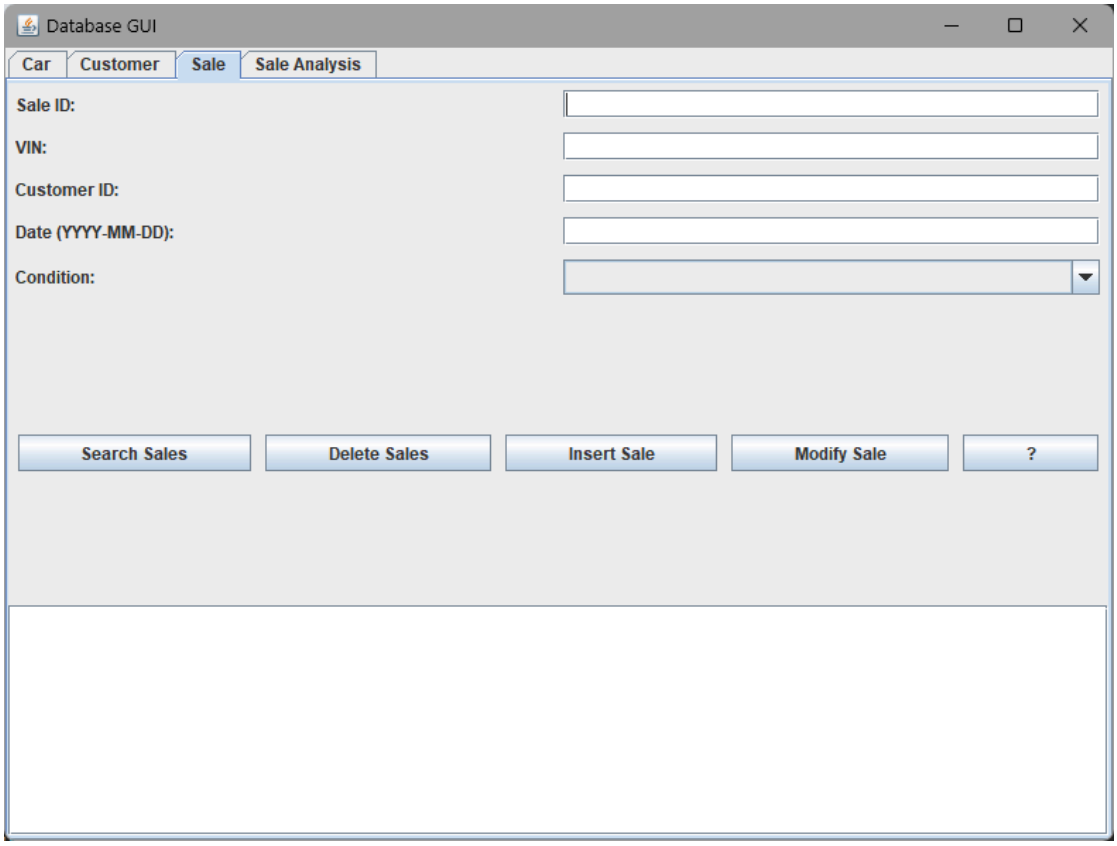
- Search Cars:
  - Optional: Fill in any field(s) to search for cars matching those criteria.
  - Leave all fields empty to view all cars.
- Delete Cars:
  - Required: Enter the VIN or any other combination of fields to identify cars to delete.
- Insert Car:
  - Required: Fill in VIN (17 characters), Make, Model, Year, Price, Condition, Status, and Category.
  - The VIN should be unique for each car.
- Modify Car(s):
  - Required: Enter the VIN to identify the car you want to modify.
  - Optional: Fill in any additional fields to update those attributes for the car.
  - Note: VIN alone will not trigger a modification; at least one additional field must be filled.
- Tips:
  - Make sure fields are filled out according to the above guidelines to avoid errors.
  - Use the dropdown menus where available to avoid typos.

Main GUI: Customer Information



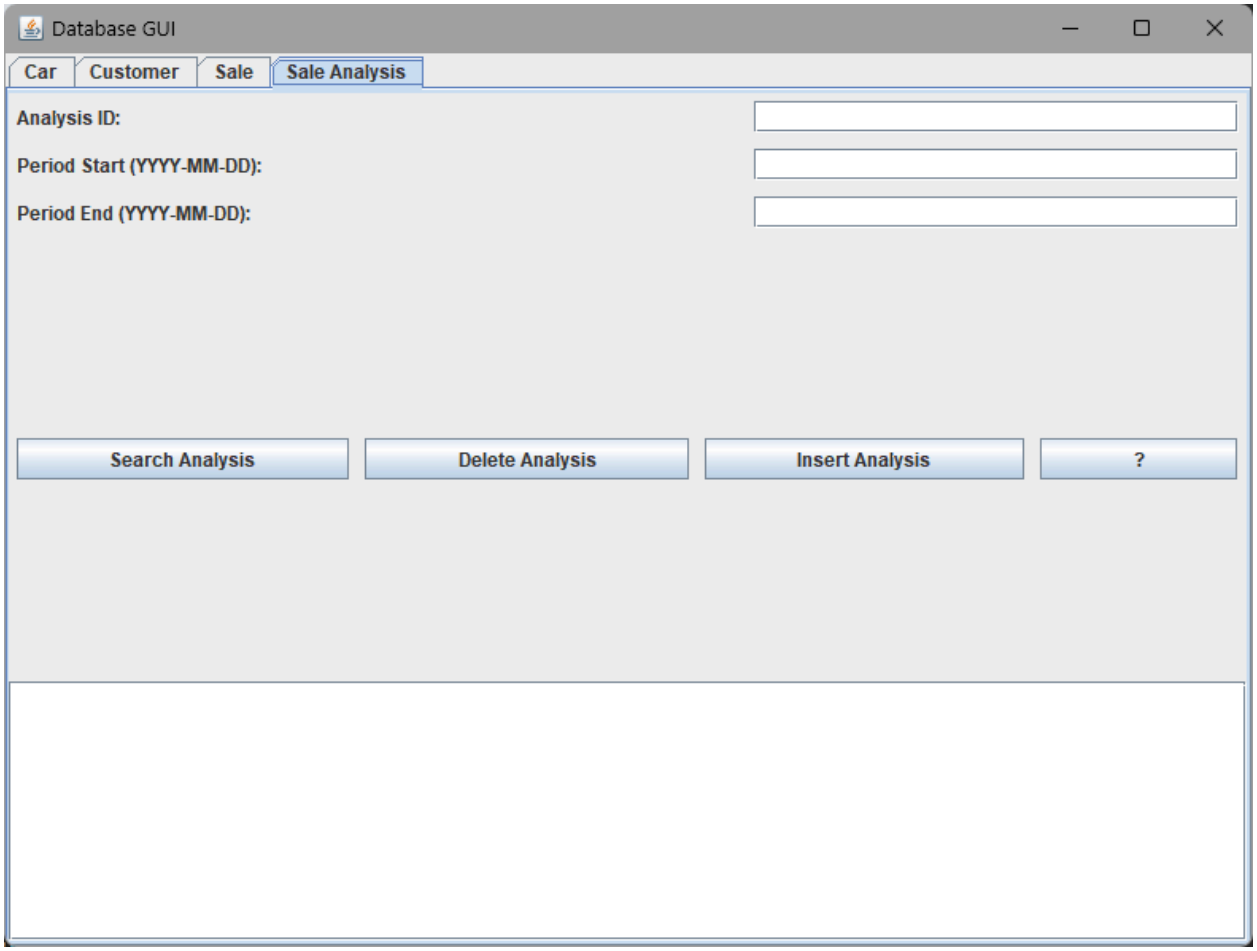
- Search Customers:
  - Optional: Fill in any field(s) to search for customers matching those criteria.
  - Leave all fields empty to view all customers.
- Delete Customers:
  - Required: Enter Customer ID or any other combination of fields to identify customers to delete.
- Insert Customer:
  - Required: Fill in Customer Name, Contact Number (10-digit), and Purchases (positive integer).
  - Do NOT fill in Customer ID, as it will be generated automatically.
- Modify Customer:
  - Required: Enter Customer ID to identify the customer for modification.
  - Optional: Fill in any additional fields you want to update.
  - Note: Customer ID alone will not trigger a modification; at least one additional field must be filled.
- Tips:
  - Use proper input format for each field (e.g., 10-digit contact number).
  - Ensure that fields are filled correctly based on the selected action.

Main GUI: Sale Information



- Search Sales:
  - Optional: Fill in any field(s) to search for specific sales records.
  - Leave all fields empty to view all sales.
- Delete Sales:
  - Required: Provide Sale ID or a combination of fields to identify records for deletion.
- Insert Sale:
  - Required: VIN (17 characters), Customer ID (positive integer), and Date (format: YYYY-MM-DD).
  - Condition is automatically set based on the car's current condition.
  - Do NOT fill in the Sale ID, as it will be generated automatically.
- Modify Sale:
  - Required: Sale ID to identify the sale record.
  - Optional: Provide VIN, Customer ID, Date, or Condition to modify respective fields.
  - Note: At least one additional field besides Sale ID must be filled to make modifications.
- Tips:
  - Ensure the VIN is exactly 17 characters for accurate entries.
  - Use the specified date format (YYYY-MM-DD) for date entries.

Main GUI: Sale Analysis



- Search Analysis:
  - Optional: Fill in any field(s) to search for specific analysis records.
  - Leave all fields empty to view all analysis entries.
- Delete Analysis:
  - Required: Provide Analysis ID or specify Period Start and/or Period End to identify records for deletion.
  - NOTE: There is no modify button as this information is calculated based on other information in the database.
- Insert Analysis:
  - Required: Period Start and Period End in YYYY-MM-DD format.
  - Analysis ID will be auto-generated.
  - Average sale price and condition, as well as the number of sales within the specified period, will be calculated and stored.
- Tips:
  - Use the YYYY-MM-DD format for all date fields.
- Note: Average Sale Condition is a number between 1 and 5 (5 correlating to new condition)

Extra GUI

- Help Button
  - The “ ? ” Button is a help button customized for each page of the database application.
  - For quick access to basic manual information, click this button.